

Cleaning up history  
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The flat, grass-covered land around Roswell, N.M., holds more than just the answer to what really crashed there in mid summer of 1947.

Hidden beneath the shrub-covered land are 12 pieces of a largely forgotten slice of Corps of Engineers involvement in Cold War history -- missile silos that in the 1960s housed the first generation of intercontinental ballistic missiles, or ICBMs, known as the Atlas missile series.

In September, the Corps, along with several cooperating agencies, signed a ready for reuse declaration for eight of the 12 silos near Roswell. This declaration is significant because it “recognizes when potential threats to the environment have been evaluated and, if necessary, cleaned up to the extent that a property is safe for its current use or planned future use,” according to the Corps of Engineers.

The first declaration for a missile silo in the U.S. was signed Sept. 16 at silo number four owned by Gary Baker. He says that it’s very important “not only for my site or me, but for the state of New Mexico. It is a very proud moment.”

With the onset of the Cold War after World War II and the Soviet Union’s successful test of a thermonuclear bomb in 1953, the race was on for the United States to stay ahead of the Soviets in weapon technology. According to the U.S. Army Corps of Engineers’ Office of History, in 1954 the Air Force was tasked with developing and building ICBMs as well as the bases needed to launch them from, “with the goal of fielding an operational missile force by the end of the decade.”

The Air Force turned to the Corps of Engineers to design and build the launch bases for the missiles. Former Walker Air Force Base near Roswell was one of the sites chosen to house the Atlas F ICBMs then under development.

Historian Dr. Ronald B. Hartzer writes that “the pressure to develop and field an ICBM was intense. Work that would have taken an estimated 13 years was accomplished in less than five.” Construction began in 1960 and all 12 Walker AFB silos were functional within two years.

For approximately 30 months, the missile silos at Walker, as well as silos in other states, served as a deterrent against Soviet aggression. To authorize an actual launch took a presidential order; none of the missiles were ever authorized to launch from the operational sites.

According to the U.S. Army Corps of Engineers’ Office of History, the scope of the project was staggering; it was one of the largest military construction projects the Corps has ever undertaken.

In early 1961, more than 21,000 people were working around the clock to build the silos at several sites across the nation. By 1961 Army contractors had already moved 26 million cubic yards of earth and stone, the equivalent of a ditch 10 feet deep and 10 feet wide from Los Angeles to Pittsburgh. Workers had also poured more than 3 million cubic yards of concrete, and used 764,000 tons of steel. By 1962 the cost was in excess of \$2 billion.

However, despite the resources pouring into the Atlas program, advancements in technology, especially in solid fuel, quickly rendered the liquid fueled Atlas missiles obsolete.

While the program was short lived, it was considered successful. Karl Dod, with the Corps' Office of History, writes that "by the end of the year 1963, the superiority of the United States over Russia in missile strength was estimated to be four to one."

In the mid 1960s the Atlas program was phased out; the missiles and their silos deactivated. The silos were declared surplus by the government, salvage rights were sold and then the silos were auctioned to non-Department of Defense agencies and individuals; most for only a fraction of their original \$20 million construction cost. One silo auctioned in the late 1960s for about \$1,700.

During the salvage phase, copper wire, steel and other valuable materials were removed from the silos to the point some were stripped completely bare. Other silos still retain infrastructure such as steel elevator railings which were used to propel the missile from the underground silo in preparation for launch.

The silos have basically been abandoned since the late 1960s. Baker remembers using them to practice rappelling with friends while at the New Mexico Military Institute in Roswell, N.M., in the 1970s. Others have left their mark on the silos, based on the graffiti present.

Additionally, several silos filled with ground water which leaked in over the years. This can be a potential source of groundwater contamination, one of many potential environmental contamination issues relating to the sites.

Beginning in the 1990s, the Corps of Engineers started an environmental assessment of the 12 silos near Roswell. Each silo was assessed for potential hazardous, toxic, or radioactive waste, HTRW, by a thorough review of written records, interviews, the analysis of maps and aerial photographs, and site visits which included sampling of groundwater and soil at each site.

Eight of the silos have received a ready for reuse declaration. The Corps is still working with the owners of the remaining silos to finish the site inspections necessary before a ready for reuse declaration can be issued.

According to Baker, several years ago potential buyers of missile silo sites might have asked about environmental impact statements at the end of closing on a site. However, in recent years, it has become one of the first things a potential buyer wants to see before buying a site.

By going through the environmental assessment process, appropriate measures can be taken to deal with identified HTRW. This is an important measure for the owners of the silos, as James Bearzi of the New Mexico Environmental Department says, "to make sure that the owners didn't inherit any environmental problems they weren't aware of."

The environmental assessment process also informs the general public about any potential environmental threats posed by the silos such as groundwater contamination and what has been done to clean-up the contamination. New Mexico has had a relatively easy clean up of the missile sites when compared to sites in other states where several forms of contamination, including contaminated groundwater, have caused significant environmental issues.

Completing the circle, the Corps of Engineers, Albuquerque District, is once again leading the nation, Baker said, in cleaning up the Atlas F missile silos. Almost 45 years ago the Corps worked hard building them to deter Soviet aggression. Now they are celebrating their work in deterring hazardous environmental contamination.